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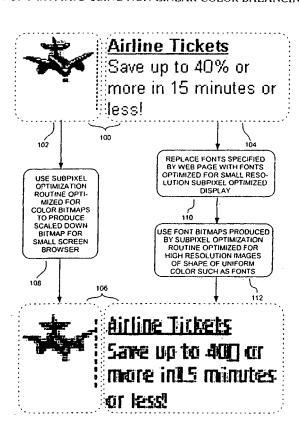
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[Continued on next page]

(54) Title: METHODS, SYSTEMS, AND PROGRAMMING FOR PRODUCING AND DISPLAYING SUBPIXEL-OPTIMIZED FONT BITMAPS USING NON-LINEAR COLOR BALANCING



(57) Abstract: A method of producing a sub pixel resolution representation of a shape suitable for display on a sub-pixel addressed screen. The method comprises producing a scaled sub pixel optimized image of a bitmap image by associating a luminosity value with each sub pixel of the scaled image as a function of the percent of the area of the sub-pixel's area in the image that is covered by the shape and a color balancing function designed to distribute a portion of a sub pixel's luminosity value that otherwise would cause color imbalance to nearby sub pixels of different colors. The percent of a sub pixel's luminosity values that is so distributed is a function of the percent of the sub pixel's luminosity value, which causes color imbalance. An advantage is that it reduces the amount of luminosity value distributed for color balance purposes to approximately only that amount which is necessary to achieve color balance, and increases the clarity of sub pixel optimized images.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/14282

USCL: 345/613 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHESD  Documentation searched (classification system followed by classification symbols) U.S.: 345/613, 619, 660  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched the raster tragedy at low resolution, Beat Starm, Presentation at the training session  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted full full of the international search (name of data base and, where practicable, search terms used)  Electronic data base consulted full full of the international search (name of data base and, where practicable, search terms used)  Electronic data full full of the international search (name of data base and, where practicable, search terms used)  Electronic data full full of the international search (name of the search search terms of partical date full data full full full full full full	A. CLASSIFICATION OF SUBJECT MATTER									
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Category * Citation of document, with indication, where appropriate, of the relevant passages  Relevant to claim No.  US 6,339,426 B1 (LUI et al) 15 January 2002 (15.01.2002), column 4, lines 15-24; 9;Fig. 6; column 13, lines 59-67; column 17, lines 15-55; column 3, line 40-58; column 15, lines 5-15; column 4, lines 15-24.  X The raster tragedy at low resolution, Beat Stamm, 29 October 1997 (29.10.1997), Page 4; Page 2, Fig. 2.  * Special categories of cited documents:  *A* document defining the general state of the art which is not considered to be of particular relevance of particular relevance; the claimed invention cannot be residuit in the publication date of another claimon or other special reason (as specifical)  *C* document splitshed prior to the international fling date but later than the priority date claimed  Date of the actual completion of the international search  92 September 2002 (09.09.2002)  Name and mailting address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washingon, D. C. 20231  **Relevant to claim No.  1-(5, 8-13,15-21;23- 38;41-45  **38;41-45  **38;41-45  **7. 13-14,22,39,40  **7. 13										
See patent family annex.   1-6; 8-13; 15-21; 23-38; 41-45										
column 17, lines 1-7; column 10, see fig. 7; column 11, lines 10-27; Fig. 1; Fig. 2; Fig. 9; Fig. 6; column 3, lines 59-67; column 17, lines 15-55; column 3, line 40-58; column 15, lines 51-5; column 4, lines 15-24.  X The raster tragedy at low resolution, Beat Stamm, 29 October 1997 (29.10.1997), Page 4; 7,13-14,22,39,40 Page 2, Fig. 2.  **Special categories of cited documents:  *A* document defining the general state of the art which is not considered to be of particular relevance.  *B* earlier application or patent published on or after the international filing date or example to ensuit the publication date of another cited nor other special reason (a specificad) in the publication date of another cited nor other special reason (a specificad) of occument which hasy throw doubts on priority claim(s) or which is cited to establish the publication date of another cited nor other special reason (a specificad) of occument which hasy throw doubts on priority claim(s) or which is cited to establish the publication date of another cited nor other special reason (a specificad) of occument published on or after the international filing date when the document is taken alone.  *Y* document which hasy throw doubts on priority claim(s) or which is cited to establish the publication date of another cited nor other special reason (a specificad) or the considered to involve an inventive step when the document is combined only one or other such documents.  *Y* document member of the same patent family  *Date of the actual completion of the international search report  *B* QUY 2002  *Authorized officer*  Washingon, D. C. 20231										
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Form PCT/ISA/210 (second sheet) (July 1998)



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